

AMENDMENT UNDER 37 C.F.R. §1.116  
U.S. SERIAL NO. 09/853,674

ART UNIT 1733  
Q62558

**REMARKS**

Claims 2-9, 11-14, 16-20 and 22 are all the claims presently pending in this application, all of which are rejected. Claims 1 and 21 were previously cancelled. The recitations of dependent claim 10 are hereby incorporated into independent claim 2, and claim 10 is thus also cancelled.

Claims 2-6, 10-13, 16-19 and 22 are rejected under 35 U.S.C. §103(a) as being unpatentable over Sato (JP 11-78411) and further in view of Sato (JP 11-78410, Sinopoli (U.S. Patent No. 5,743,975) and Koch (U.S. Patent No. 6,012,498). Applicants respectfully traverse this rejection in view of the following remarks.

In Sato (JP 11-78411), which is the primary reference of the aforementioned 35 U.S.C. §103 (a) rejection against claim 2, there is described no feature corresponding to the formula " $0.25 \text{ mm} \leq \delta G \leq 1.00 \text{ mm}$  --- (3)" of former claim 10. Further, Sato (JP 11-78410), which is one of the secondary references and discloses the feature of intervals between the metal cords of Sato (JP 11-78411) in detail, similarly discloses no such feature.

In fact, in all of examples 1, 2 and comparative examples 1-10 described in Sato (JP 11 78410), at least one of the respective cord intervals (D1; D2) of the two belt layers (31, 32) is outside the aforementioned specific range of " $0.25 \text{ mm} \leq \delta G \leq 1.00 \text{ mm}$ " of the present invention.

AMENDMENT UNDER 37 C.F.R. §1.116  
U.S. SERIAL NO. 09/853,674

ART UNIT 1733  
Q62558

Specifically, in example 1 of Sato (JP 11-78410), D1 is 1.03 mm and D2 is 0.72 mm. Therefore, although D2 is within the aforementioned range of " $0.25 \text{ mm} \leq \delta G \leq 1.00 \text{ mm}$ ," D1 is outside the range. In example 2, in which D1 is 1.20 mm and D2 is 0.72 mm, D1 is outside the range. Both D1 and D2 are very small in comparative example 1, while both D1 and D2 are very large in comparative examples 2, 4, 7 and 9, whereby both D1 and D2 are outside the range in these comparative examples. In the remaining comparative examples 3, 5, 6, 8 and 10, *one of* D1 and D2 is outside the range.

In contrast, in the present specification, there is clearly stated in the second full paragraph of page 14 thereof that the interval (50) between the metal wire bundles in each of the two belt plies should satisfy the formula (3), i.e.,  $0.25 \text{ mm} \leq \delta G \leq 1.00 \text{ mm}$ . The  $\delta G$  range has thus been specified in the present invention, on the basis of the discovery that, "When  $\delta G$  is less than 0.25 mm, the generation and growth of belt end portion separation cannot be

AMENDMENT UNDER 37 C.F.R. §1.116  
U.S. SERIAL NO. 09/853,674

ART UNIT 1733  
Q62558

suppressed. When  $\delta G$  exceeds 1.00 mm, due to the interval between the metal wire bundles becoming too large, the belt rigidity decreases, and the penetration resistance when the tire rides over nails or the like is poor" (the last line of page 14 to line 5 of page 15 of the present specification).

On page 2 of the Advisory Action dated July 7, 2004, the Examiner asserts that "absent any conclusive showing of unexpected results, one of ordinary skill in the art at the time of the invention would have found it obvious to have a bundle spacing between 0.25 mm and 1.00mm." Along with this Amendment, Applicant is submitting a Declaration Under 37 C.F.R. § 1.132 showing the unexpected and superior effects of the present invention which are caused by the unique feature of " $0.25 \text{ mm} \leq \delta G \leq 1.00 \text{ mm}$ " defined by claim 2. As marketability of the tire, in terms of "separation length", is ensured when  $\delta G$  is within the recited  $\delta G$  range, while the same marketability of the tire is not ensured when  $\delta G$  is outside the range, Applicant respectfully submits that the superiority of the effect is unequivocal.

In contrast, in Sato, there is no description or even suggestion of restricting  $\delta G$  to the aforementioned range. D2(0.72 mm) of example 1 of Sato just happens to be within the aforementioned range because, as the Examiner states on page 2 of the July 7, 2004 Advisory Action, "the inner spacing (D2) is *by no means restricted to 0.72 mm* - this particular inner spacing is described in an example having three filaments per bundle and a filament diameter of

AMENDMENT UNDER 37 C.F.R. §1.116  
U.S. SERIAL NO. 09/853,674

ART UNIT 1733  
962558

0.28mm and 0.32 mm, respectively, in the inner and outer belt ply". Regarding D1, the outer spacing D1 is simply between 1.05 and three times the inner spacing D2. Accordingly, in Sato, the respective code intervals D1 and D2 are by no means restricted to the  $\delta G$  range defined by claim 2.

In conclusion, Applicant respectfully submits that the subject matter of claim 2 would not have been rendered obvious in view of the cited references because:

- none of the cited references disclose the specific  $\delta G$  range defined by present claim 2, i.e., the primary reference Sato, in particular, is not aware of the criticality of the range " $0.25 \text{ mm} \leq \delta G \leq 1.00 \text{ mm}$ " at all;
- none of other cited references (such as Sinopoli, etc.) discloses the specific  $\delta G$  range defined by present claim 2;
- the specific  $\delta G$  range defined by amended claim 2 provides an unexpected and superior effect as evidenced by the attached Declaration and indicated by the paragraph bridging pages 14 and 15 of the present specification,
- therefore, the present invention has sufficient inventiveness over the cited references, and the 35 U.S.C. §103 (a) rejection should be removed.

In view of the preceding amendments and remarks and the Rule 132 Declaration, reconsideration and allowance of this application are now believed

AMENDMENT UNDER 37 C.F.R. §1.116  
U.S. SERIAL NO. 09/853,674

ART UNIT 1733  
Q62558

to be in order, and such actions are hereby solicited. If any points remain in issue that the Examiner feels may be best resolved through a personal or telephonic interview, he is kindly requested to contact the undersigned attorney at the local telephone number listed below.

The USPTO is directed and authorized to charge all required fees (except the Issue/Publication Fees) to our Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



**SUGHRUE MION, PLLC**  
Telephone: (202) 293-7060  
Facsimile: (202) 293-7860

Christopher R. Lipp  
Registration No. 41,157  
for  
Steven M. Gruskin  
Registration No. 36,818

WASHINGTON OFFICE  
**23373**  
CUSTOMER NUMBER

Date: August 23, 2004